

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): A television antenna comprising:

a pair of generally sinuous antenna arms extending outwardly from a common central axis and arranged opposite each other,

each antenna arm in said pair comprising a plurality of sinuous cells, each of said plurality of cells having a rotational end terminating on an orientation line, said orientation lines of said pair of antenna arms spaced a predetermined distance apart in a parallel relationship to each other, each said antenna arm being formed without interleaving the other said antenna arm.

Claim 2 (original): The television antenna of claim 1 wherein said pair of sinuous antenna arms are formed in clockwise rotation.

Claim 3 (original): The television antenna of claim 1 wherein said pair of generally sinuous antenna arms are formed in a plane, said plane perpendicular to said common central axis.

Claim 4 (original): The television antenna of claim 3 wherein said plane is a sheet of dielectric material and said pair of generally sinuous antenna arms are printed from metal-based conductive ink on said sheet.

Claim 5 (original): The television antenna of claim 3 wherein the output impedance of the television antenna is a function of the predetermined distance.

Claim 6 (original): The television antenna of claim 3 wherein said pair of generally sinuous antenna arms are formed from metallic material in said plane.

Claim 7 (original): The television antenna of claim 1 further comprising:
a reflector plane,
at least one support connected to said reflector plane and to said pair of generally sinuous antenna arms, said at least one support providing a separation distance between said reflector plane and said pair of generally sinuous antenna arms, the front-to-back ratio of said television antenna at least a function of said separation distance.

Claim 8 (original): The television antenna of claim 7 wherein said separation distance is less than a separation distance providing optimal front-to-back ratio so that said television antenna is low-profile.

Claim 9 (currently amended): The television antenna of claim 7 where the reflector plane is a grid of square reflector elements of conductive metal material, the dimensions of each said reflector elements at least being an odd percentage of a wavelength of an undesired signal so as to reject said ~~unwanted television~~ undesired signal.

Claim 10 (original): The television antenna of claim 9 wherein the conductive metal material is conductive ink.

Claim 11 (original): The television antenna of claim 1 wherein each antenna arm in said pair has the identical shape.

Claim 12 (original): A television antenna comprising:

a pair of generally sinuous antenna arms extending outwardly from a common central axis and arranged opposite each other,

each antenna arm comprising a plurality of sinuous cells, each of said plurality of cells having a tapered rotational end terminating on an orientation line, said orientation lines of said two antenna arms spaced at a predetermined distance in a parallel relationship from each other, each said antenna arm being formed without interleaving the other said antenna arm, wherein the output impedance of the television antenna is at least a function of the predetermined distance,

a reflector,
at least one support connected to said reflector and to said pair of antenna arms, said at least one support providing a separation distance between said reflector and said pair of antenna arms, the front-to-back ratio of said television antenna at least a function of said separation distance.

Claim 13 (currently amended): The television antenna of claim 12 where the reflector is a grid of square reflector elements of conductive metal material, the dimensions of each said reflector elements at least being an odd percentage of a wavelength of undesired signal so as to reject said unwanted undesired signal.

Claim 14 (original): The television antenna of claim 12 wherein said television antenna optimally receives UHF signals in a first orientation and VHF signals in a second orientation.

Claim 15 (original): A television antenna comprising:

two antenna arms located opposite each other on an axial axis and separated from each other by a first predetermined distance for receiving broadcast UHF television signals,

a pair of phasing stubs, one of said phasing stubs connected to a feed point on one of said antenna arms,

a reflector oriented a second predetermined distance on said axial axis from said two antenna arms,

said first and second predetermined distances selected to provide a desired output impedance at the phasing stubs of about 300 ohms.

Claim 16 (original): The television antenna of claim 15 wherein said two antenna arms form a wedge shape.

Claim 17 (original): The television antenna of claim 15 wherein said two antenna arms are of identical and sinuous shape.

Claim 18 (currently amended): A UHF television antenna comprising:
a pair of generally sinuous identical antenna arms receiving UHF television signals, said pair of antennas extending outwardly ~~in-a plane~~ from a common central axis and arranged opposite each other,

each antenna arm in said pair of antenna arms comprising a plurality of sinuous cells, each of said plurality of cells having a tapered rotational end terminating on an orientation line, said orientation lines of said pair of antenna arms spaced a first predetermined distance in a parallel relationship to each other, each said antenna arm being formed without interleaving and without touching the other said antenna arm,

a pair of phasing stubs, one of said phasing stubs connected to a feed point on one of said antenna elements,

a reflector oriented a second predetermined distance on said axial central axis behind said pair of antenna elements,

said first and second predetermined distances selected to provide a desired output impedance at the phasing stubs of about 300 ohms in a bandwidth for UHF signals.

Claim 19 (currently amended): The UHF television antenna of claim 18 wherein said pair of antenna arms are formed on a sheet of dielectric material in ~~said [[a]]~~ plane, said sheet oriented perpendicular to said common central axis.

Claim 20 (currently amended): The UHF television antenna of claim 18 where said ~~reflective plane reflector~~ is a grid of square reflector elements of conductive metal material, the dimensions of each said reflector elements at least an odd percentage of a wavelength so as to reject unwanted signals.

Claim 21 (currently amended): The UHF antenna of claim 18 wherein said two pair of antenna elements arms form a wedge shape.

Claim 22 (original): The UHF antenna of claim 21 wherein the open end of said wedge shape faces said reflector and wherein said reflector form is a circular shape with the inside of said curve shape facing said open end.

Claim 23 (new): A high definition television antenna comprising:

a sheet of polycarbonate material,

a pair of generally sinuous antenna arms extending outwardly from a common central axis and arranged opposite each other, said pair of generally sinuous antenna arms formed in a plane on said sheet of polycarbonate material, said plane perpendicular to said common central axis, said pair of generally sinuous antenna arms printed on said sheet with silver conductive ink,

each antenna arm in said pair comprising a plurality of sinuous cells, each of said plurality of cells having a rotational end terminating on an orientation line, said orientation lines of said pair of antenna arms spaced a predetermined distance apart in a parallel relationship to each other, each said antenna arm being formed without interleaving the other said antenna arm.

Claim 24 (new): The high definition television antenna of claim 23 further comprising:

a reflector plane, said reflector plane having a grid of square reflector elements of silver conductive ink printed on a surface of polycarbonate material, the dimensions of each said reflector elements at least being an odd percentage of a wavelength of an undesired signal so as to reject said undesired signal,

at least one support of high dielectric material connected to said reflector plane and to said pair of generally sinuous antenna arms, said at least one support providing a separation distance between said reflector plane and said pair of generally sinuous antenna arms, the front-to-back ratio of said television antenna at least a function of said separation distance.

Claim 25 (new): The high definition television antenna of claim 24 wherein said separation distance is less than a separation distance providing optimal front-to-back ratio so that said television antenna is low-profile.

Claim 26 (new): A television antenna comprising:

a sheet of polycarbonate material,

a pair of generally sinuous antenna arms extending outwardly from a common central axis and arranged opposite each other, said pair of generally sinuous antenna arms formed in a plane on said sheet of polycarbonate material, said plane perpendicular to said common central axis, said pair of generally sinuous antenna arms printed on said sheet with silver conductive ink,

each antenna arm comprising a plurality of sinuous cells, each of said plurality of cells having a tapered rotational end terminating on an orientation line, said orientation lines of said two antenna arms spaced at a predetermined distance in a parallel relationship from each other, each said antenna arm being formed without interleaving the other said antenna arm, wherein the output impedance of the television antenna is at least a function of the predetermined distance,

a reflector, said reflector having a plurality of reflector elements of silver conductive ink printed on a surface of polycarbonate material,

at least one support of high dielectric material connected to said reflector and to said pair of antenna arms, said at least one support providing a separation distance between said reflector and said pair of antenna arms, the front-to-back ratio of said television antenna at least a function of said separation distance.

Claim 27 (new): A high definition television antenna comprising:

a pair of generally sinuous identical antenna arms receiving high definition television signals, said pair of generally sinuous antennas extending outwardly from a common central axis and arranged opposite each other, said pair of antenna arms are printed on dielectric material with conductive ink,

each antenna arm in said pair of antenna arms comprising a plurality of sinuous cells, each of said plurality of cells having a tapered rotational end terminating on an orientation line, said orientation lines of said pair of antenna arms spaced a first predetermined distance in a parallel relationship to each other, each said antenna arm being formed without interleaving and without touching the other said antenna arm,

a pair of phasing stubs, one of said phasing stubs connected to a feed point on one of said antenna elements,

a reflector oriented a second predetermined distance on said axial axis behind said pair of antenna elements,

said first and second predetermined distances selected to provide a desired output impedance at the phasing stubs of about 300 ohms in a bandwidth for said high definition signals.

Claim 28 (new): The high definition television antenna of claim 27 wherein said two antenna arms form a wedge shape.

Claim 29 (new): The high definition television antenna of claim 28 wherein the open end of said wedge shape faces said reflector and wherein said reflector form is a circular shape with the inside of said curve shape facing said open end.